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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---------------------------------------------------------------------------------------------------------------|-------------|----------------------|---------------------|------------------|
| 10/738,358 | 12/05/2003 | Guangming Dai | 018158-022220US | 8551 |
| 20350 | 7590 | 05/08/2006 | EXAMINER | |
| TOWNSEND AND TOWNSEND AND CREW, LLP TWO EMBARCADERO CENTER EIGHTH FLOOR SAN FRANCISCO, CA 94111-3834 | | | SANDERS JR, JOHN R | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 3735 | |

DATE MAILED: 05/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/738,358

Applicant(s)

DAI ET AL.

Examiner

John R. Sanders

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 December 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-81 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-81 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>7/2/04, 9/1/04, 10/14/05, 3/28/06</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION***Double Patenting***

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claims 1-81 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-8 of copending Application No.

11/134,630. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims in the instant application are broader than those of the copending ‘630 application; therefore, any apparatus meeting the limitations of the copending ‘630 application would necessarily meet those of the instant application.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 101

3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4. Claims 14, 15, 37-51 and 63-64 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

The “prescription generating module” in claim 14, the “optimizer module” in claim 37, the “module that determines an optical shape” in claim 51, and the “module that scales” in claim 63 are non-statutory matter since claims to software or a program that does not recite a tangible computer readable medium have been determined to be insufficient to be considered a machine, manufacture, or a process. See MPEP §2106 IV B 1(a).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-72 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,724,258 to Roffman (“Roffman”).

7. Roffman discloses an analysis method for designing multifocal contact lenses, the preferred design being optimized for the treatment of presbyopia. In the analysis model, the lens

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is divided into different concentric regions. The central region has distance optical corrective power, the intermediate region has both near and distance optical corrective power and the outer region has distance optical corrective power (col. 1, line 60 - col. 2, line 36), thus the effective correction provided by the prescription is dependent upon pupil size. Roffman discloses pupil function as one optical design parameter in that the size of the pupil dictates the amount of add power that is used in the corresponding corrective power regions (col. 8, lines 4-43). As such, though Roffman may not expressly disclose measurement of a pupil dimension and desired power at a certain viewing distance, Roffman does disclose the determination of the lens design based on measured patient parameters such as required power at a certain distance and at a certain pupillary function. Since pupil diameter measurements are necessary for determinations of pupillary function, one of ordinary skill in the art, based on the disclosure of Roffman, would have found it obvious to relate pupillary diameter measurements to distance and required power measurements, especially given that the corrective power of the lenses disclosed by Roffman are expressly dependent upon the pupil size of the eye, such progressive power lenses further being known in the art.

8. Roffman discloses accounting for age as a patient parameter in the lens design method, as patient age has relevance to pupillary and accommodative function (col. 3, line 45 - col. 4, line 7).

9. Roffman discloses a neural network model for optimizing the design of the corrective prescription based on the disclosed patient parameters (col. 5, line 63 - col. 7 line 45). In the broadest reasonable interpretation, this neural network reads on the broadly claimed “goal

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function” of the instant invention in that Roffman discloses inputting patient parameters and generating an optimized prescription output that mitigates presbyopia. See also claim 1.

10. Claims 73-81 are rejected under 35 U.S.C. 103(a) as being unpatentable over Roffman in view of U.S. Patent No. 6,808,266 to Youssefi (“Youssefi”).

11. Roffman is silent with respect to polynomial wavefront representation being used to determine effective powers based on certain pupil diameters. However, Zernike polynomial characterization of wavefront aberration was known at the time of the invention. Youssefi teaches determining the manifest refraction at a range of pupil sizes based on the Zernike model of the wavefront (col. 3, line 15 - col. 4, line 2). One of ordinary skill in the art would have found it obvious to modify Roffman to calculate the manifest refraction corresponding to various pupil sizes based on a Zernike model of the wavefront, as taught by Youssefi, in order to characterize the manifest refraction in more precise model provided by Zernike analysis.

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John R. Sanders whose telephone number is (571) 272-4742. The examiner can normally be reached on M-F 10:00 am to 6:30 pm.

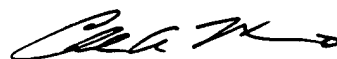
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Marmor, II can be reached on (571) 272-4730. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



29 April 2006



Charles A. Marmor, II
Supervisory Patent Examiner
Art Unit 3735